

ABSTRACT

It is an object of the present invention to provide a particle crushing and sizing apparatus having a sufficiently wide particle crushing and sizing range, capable of being scaled down in size, and having high processing throughput. To achieve the object, a particle crushing and sizing apparatus has, in a casing 1a, a horizontally provided drive shaft 2, a plurality of circular plates 10 fixedly supported with intervals at the drive shaft 2, and stators 5 arranged so as to be opposed to plate faces 10a at lower peripheral edges of the circular plates 10 and each having inclined faces 5b that cause a gap between the plate faces 10a of the circular plates 10 to become narrower toward peripheral edges of the plate faces 10a. The plate faces 10a of the circular plates 10 and the inclined faces 5b of the stators 5 form gap portions A where particles are held, and particle crushing and sizing portions B are formed by the peripheral edges of the circular plates 10 and narrowest gap portions between the peripheral edges of the circular plates 10 and the inclined faces of the stators 5.